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THE

MEDICAL AND SURGICAL REPORTER.

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ORIGINAL DEPARTMENT.

COMMUNICATIONS.

IS THERE NOT AN ELEMENT WANTING IN THE CONSTRUCTION OF THE OBSTETRIC FORCEPS?

Read before the Philadelphia County Medical Society,

BY J. A. M'FERRAN, M.D.

Physician to the Gynecological Hospital.

(Continued from No. 1083.)

The child, in passing through the pelvis, does so in a passage curved at least in two places, namely, at the angle made at the junction of the axes of the superior and inferior straits, and at the os externum. To these we might add, if Nægeli were correct, one at the angle made at the axis of the body with that of the superior strait. Having no evidence, either from experience or reason, that this is correct, we will confine ourselves to the two.

Now, it is indisputable that, if the child were forced to this curve with no joint at the junction of the head with the spine, it would not nor could not move. A child with a stiff neck might engage in the superior strait; but it could advance no further; and one with an ankylosed spine would be as bad off. And daily observation teaches us that we have the best example of labor where the child's head is left free to seek the easiest passage for exit; where there are no anatomical aberrations or deformities, and where the propulsive force is sufficient to overcome the resistance of the soft parts and to produce the natural flexions, rotations and extensions incident to the demand

made by the different curves and reversed diameters.

In the use of the forceps, the head becomes fixed against any flexion, rotation, extension or deflection, or any natural law operating to avoid or correct difficulties, and is subject to two forces, inharmonious in their nature and separate in their sources. The child's neck is practically stiff, or, at least, the head is not free to flex upon it, and the head cannot be subject to the will of the operator; it is attached to an unwieldy body in the rear, which will modify in an uncertain way all efforts made in front. Accommodation is out of the question, for the same effort cannot control both forces.

We are advised, by most distinguished teachers, to make a gentle and limited swinging, to-and-fro motion, in traction, lever-like in its character, as it is frequently expressed. I do not dispute the necessity of the manœuvre; but we know that it is not thus that the head moves when left to its own course in unassisted labors, or even in podalic version, and I am thoroughly satisfied that the leverage is greatly overestimated in the procedure; the utility of it is only necessary on account of the misdirected force, and for a purpose not contemplated, at least not spoken of, by writers upon the subject. In my opinion, it only serves to cause the head to ride over the corrugated mucous membrane shoved in advance of it, pressing unnaturally upon the parts. The head, being thrown out of line by the oblique traction, will, of necessity, be forced against the pelvis, in the direction of the operator. I know this is contrary to what is taught. Most obstetricians speak of the forceps as a double lever, with the

fulcrum at the pivoted point, and that, by pressing first upon one handle, and then upon the other, we increase the efficiency of the force used. Upon what principle in mechanics they base their opinion I am unable to discover. If the male and female branches, when joined, do not make a unit, I do not know what unity means; they move together, and preserve their relation toward each other, direct them which way you will; and that the pivot can be a fulcrum, and change its position with the sweep of the arm of the lever, is a principle in natural philosophy that I have never learned. True, the branches are levers as compressors, and the pivot is a fulcrum to the same end; here the principle of the lever stops, and here they act independently; but when they are joined to the head, they make it a part of a common instrument; and where the head presses upon the pelvis, it may become a fulcrum, provided friction is great enough to make it stick; and the forceps, together with the head, may become a lever, on the same principle as the cant-hook. But, to be effective in this manner, the tissues of both mother and child would be subjected to a pressure greater than they would otherwise have to bear, and as it is impossible to produce such friction between smooth and lubricated surfaces ascending an inclined plane, the procedure is impracticable in obstetrical operations.

We will suppose the forceps applied to the sides of the head, in the direction of its occipito-mental diameter, and suppose the head engaged in the superior strait in the first position. The forceps will fix the head at an angle of fifty degrees with the axis of the inferior strait, and the operator is expected to supply the force, give it direction, measure the progress, control the rotation and flexion, all at the same time. He is expected to avoid the perineum, keep the head to the easiest course, and use the force in the most efficient manner. And to do all this correctly, requires in the individual absolute self-control, a complete knowledge of this particular pelvis, its relation to the foetal head, the amount of force exerted by the contracting uterus, and to be possessed of an instrument perfectly adapted to all the requirements of the case. It would be too much to expect all this from human skill. Yet we all act, at times, as though we knew and could do all things necessary, and practically, in most cases, it is never discovered

that we do not; for, in spite of misdirected force, forgetfulness of curves, axes, rotations, flexions and extensions, the woman, in most cases, will be delivered and the child perchance be born.

Now, supposing, in this case, the circumstances most favorable, the relation of the head and pelvis and the yielding of the soft parts natural, is it possible with the forceps to direct the force in the direction indicated by the anatomy of the parts and the fundamental principle of mechanics? I have no hesitation in saying, no! The direction of the force should be as that given by the uterus, and that is in the direction of the axis of the superior strait. That force so directed is more efficient, meets with less obstruction, and does the least violence to the soft parts, is evident upon the least reflection, and the principle has been acknowledged all through obstetrical progress, from the days of Smellie to the present time.

The first object and effect—saying nothing of uterine dilatation—of the force is to drive the head into the cavity of the pelvis, and is exerted through the spinal column upon the base of the skull, at a point where freedom of motion is as great as in any other part of the body. The head once in the cavity, the force acts in the same manner, but gives no direction to the head, leaving it to take that which offers the least resistance. The head is held in a state of flexion in its descent by the pressure of the opposing sides of the pelvis, and is only liberated when a point near the base of the skull and the top of the pubic arch coincide. Then rotation is completed. The os coccygis is straightened, and the perineum is distended and projected forward by the force still acting in the same direction. The head is deflected from the first course by the inclined plane of the floor of the pelvis, but held by the pubic arch from extreme extension until the neck is at the arch, when flexion backward takes place, brought about, in a great measure, by the resistance of the distended perineum and os coccygis. There is but little advance of the child, as a whole, from any direct expulsive effort, after the head has reached its lowest limits in the pelvis, until after the head is delivered; and it will be observed that the direction of the force changes but very little from the time labor commences until the body is expelled, and that it is in a line with the axis of the superior

strait. The process of nature commends itself to our reason, and experience testifies to the wisdom in it. Such being the case, traction made in any other direction than that indicated by the contractions of the uterus, before descent is completed, would force the head firmer against the bones of the pelvis, destroy its freedom, and subject the opposing tissues to pressure greater than is good for either, and, without the exercise of great caution, bring about extension before the completion of the descent of the head, thereby approaching a face presentation, and subjecting the mother to the concomitant dangers.

The forceps holds and operates upon the head as a whole, and any traction out of a direct line with the axis must of necessity have a tendency to throw a longer diameter of the head across the pelvis, and out of its axis; in fact, to a greater or lesser degree, to wedge it between the opposing sides, because it is held at both ends, with a power above acting to fix it firmer and firmer, with each contraction of the womb, to its place.

The junction of the head with the body is the pivotal point in unassisted labors. But when the forceps is applied, the head is held obedient to its motions, and when traction is made out of a line coincident with the axis of the pelvis the pivot is at the point of resistance, which becomes a fulcrum, and the long arm of the lever is from the operator's hand to that point, and the head from the same point, the short arm; consequently it subjects the parts to a multiplication of the force applied, and that in a direction which impedes progress, and often too, in my opinion, to such an extent that safe delivery becomes impossible. It can hardly be possible, that if the herculean strength sometimes exerted to effect delivery were well directed, anything short of absolute and insurmountable disproportion between the parts could prevent the passage of the head through the pelvis. Picture a man of two hundred pounds weight pulling with all the blind effort of baffled skill, with his knees or feet propped against some unyielding substance, and the woman held in position by assistants; you will have no fancy picture, but a copy from reality, if the reports from operators be true. The wonder is in the fact that the tender tissues of the child do not yield and tear into fragments, and the firmer parts of the mother break into a disorganized mass under the pressure. That

women often pass through and survive this terrible ordeal, though bruised, sore, and exposed to all the dangers attendant upon the most mischievous traumatic causes, is no secret in every community; statistics, large, detailed, and convincing, could be furnished to prove the success of this procedure; and there are those who would drown out of countenance any doubt of the correctness of this seemingly inhuman practice. We are led to believe that in exhausting their strength they exhausted all their art and skill. Worn out by unavailing efforts, disappointed in every new theory that the inspiration of the moment suggests and past experience warrants, it is not strange that blind and desperate efforts are at times resorted to to accomplish that which could find no solution in good judgment. From the boy to the man there are examples enough to make a rule, that offended pride of opinion is restless, and failure stimulates to a blind exhibition of effort; and nowhere do we see this exemplified oftener than in difficult labor, except, it may be, in efforts to start a baulky horse.

I have said it is impossible to produce traction in a line with the axis of the superior strait, for, be the shape or curve of the forceps what they may, the force will be in a line from the point of traction to the place of attachment, or the centre of gravity, or centre of resistance. And, inasmuch as the perineum covers the superior strait in a great part, the line of traction must, to avoid injuring that organ, be thrown nearly in the direction of the axis of the inferior strait, and obliquely to the line of descent; and, for the same reason, the obliquity must increase as the head descends. It would not, under ordinary circumstances, be necessary to remind you of this obliquity, but here it is well to remember that about eight parts in thirty of the force used in traction is lost on the opposing surfaces at the start, and increases as the head descends. The force in an oblique direction is to that in a direct line as the diagonal to the base line of a parallelogram, and as the head descends it shortens the perpendicular, lengthens the base, and approximates it and the diagonal, and consequently cross-pressure is more and more nearly established. This being the case, with the head moving unobstructively over a plane, it might make but little difference in practice; but when it is remembered that the head is subject to the direction of the forceps in changing the

direction of traction, and that it may become wedged between the opposite sides of the pelvis in consequence of such change, we must acknowledge that there is something wanting in the construction of the forceps to make it an instrument certain in its conformation with these well-understood physical laws. It may be urged, on empirical principles, that it is not possible for this to make any difference, for that hundreds of labors are expeditiously terminated by the use of the forceps applied in this manner, no one would be presumptuous enough to deny. But I affirm that, even in the most skillful hands, and in the most favorable cases, part of the force so applied, on account of the causes already named, must certainly be spent upon the opposing tissues ; and if so, injurious in proportion to its quantity. And that the forceps are always handled with the greatest possible amount of skill, is hardly to be supposed, when we take into consideration the actual facts in practice and the extent of their use at the present time. We need not search far for proof that the fascination of operative procedure and the stimulus of professional rivalry have thrown down the bars of caution, and opened a free field of competition to any who are bold enough to enter it. The difficulties and dangers which once were said to have surrounded instrumental interference have resolved themselves into questions of small moment, and in the hush of the night, and in the dark and secret chambers of a woman's body, the problem of health and disease, of life and death, is solved without hesitation, even by tyros in the profession. But the use of the forceps presupposes some disproportion between the head and pelvis, naturally produced or consequent upon position. In such cases the demand for every advantage becomes the more imperative. In parts in close contact, moving over each other with great friction, even in a direct line, and held to a certain position by counter-pressure, any force out of a direct line has a tendency to increase the diameter in the proportion of the base to the hypotenuse, and to force a relatively large substance through a small opening, which is impossible ; hence the parts become locked, the force applied is not available, and if persistent, contusions or a solution of continuity must follow.

Suppose the head still engaged at the superior strait, three inches and a half in the

bi-parietal diameter, and caught in the sacro-pubic diameter, three inches across, and the forceps properly applied. Now, suppose the head can be moulded and compressed to a size corresponding to that of the diameter of the pelvis. Is it not evident that any obliquity of the head from the axis of the superior strait must lengthen the diameter of the head, and consequently jam it between the promontory of the sacrum and pubis ? I have said, when properly applied ; and although, when practicable, and consonant with sound principles, it is desirable to apply them to the sides of the head, still the absolute rule of thus applying them partakes somewhat of the dogmatism of fashion, and although having, at first sight, the appearance of correct principles to sustain it, it is, nevertheless, subject to such great inconveniences in practice, and is so much opposed to our appreciation of the situation and direction of the head in the pelvis, that it would seem impossible to do so in transverse positions without doing violence to the perineum or giving an anterior obliquity to the head. If you cannot push the handles of the forceps far enough back toward the sacrum to bring the sides of the blades in a line coincident, or, at least, parallel, to the axis of the superior strait, you cannot apply them to the sides of the head, with it resting in its natural and easiest position for passing through the strait ; and if there be a natural obliquity of the head toward the sacrum, as maintained by Nægeli, the difficulty would be increased. Be his doctrine admitted or not, as regards natural labors, we all know that, in brims contracted antero-posteriorly, the inclination of the brim is increased and fixed to a greater or lesser degree ; and as it is in such cases that we are the most frequently called upon to apply the forceps at the superior strait, we must expect to meet a direction of the head coinciding with a line perpendicular to the increased inclination, which will increase the difficulty in applying the forceps to the side of the head. And if you force the head to the direction of the handles, you will increase the diameter of the engaging part in proportion to the inclination forward ; and if it be great you will hook, if I may use the expression, the boss of the parietal bone over the promontory of the sacrum, and increase, rather than lessen, the difficulty by a faithful adherence to the rule.

It would seem that any reference to artificially produced obliquities of the head, in the

short diameters of the pelvis, if we may judge from their silence upon the subject by distinguished writers and practitioners, is unworthy of notice; and to mention it is but to call to mind a schoolboy's problem. Still, in the face of its simplicity, it is well to bear it in mind. From what has been said, I think it must be apparent that traction cannot be made to advantage with the forceps so applied and the head so placed. I have purposely avoided appealing to authorities, but I cannot refrain from referring to what Dr. Barnes says of the promontory of the sacrum. He says: "The promontory possesses a like importance at the time of entry of the pelvis to that which the symphysis pubis possesses at the outlet. The promontory is a turning point, a centre of revolution, just like the symphysis. The curve round the pubis, which Carus described, has its counterpart in a curve around the promontory. In ordinary labor, with a well-constructed pelvis, the head enters the pelvis, and reaches the floor without deviating much from the straight line which represents the axis of the brim. Thus, it enters its orbit, the circle of Carus, at once. But a projecting promontory, involving as it does commonly a scooped-out sacrum below, disturbs this course. The promontory must be doubled. I propose to call this the curve of the false promontory." Here, as Dr. Barnes says, the promontory becomes the turning point, and well may we ask which way will the head turn? Which way can it turn? Most assuredly not to the front; it must turn backward; then how is it possible to favor its doing so with the forceps, and more especially with the forceps applied to the sides of the head? We want something by the means of which we can roll it into the hollow of the sacrum, and of a certainty we cannot do it by pulling forward.

By keeping the head well flexed, and in its descent correctly in a line with the axis of the brim until it presses upon the floor of the pelvis, we insure rotation, not only in the first and second positions, but also in the fourth and fifth, but cause the nape of the neck to become the centre of extension, making the radius bounded by the distended perineum shorter; we therefore lessen the risk of rupture of that organ, and the chances of the consequent dangers attendant upon such an accident. With the forceps as constructed you cannot do this satisfactorily. The head will extend as it de-

scends, being held to the motions of the forceps; the perineum being in the way, instinctively and correctly, for the safety of the perineum, we must and will shun it in our efforts to extract the head, but by so doing we elevate the handles, make them the long arm of a lever, and depress the blades; the short arm, the fulcrum, being above, the forehead is carried down; thus inadvertently we bring the long diameter of the head into play as a means of rupture, whereas, if we could bring the neck to the arch of the pubis before extension takes place, we would have the advantage of a smaller sweep of the head, and consequently would avoid excessive distention of the perineum; and the occiput, being kept lower in the pelvis than the forehead, will strike the inclined plane of the floor of the pelvis, and deflect even from its posterior position to the front, and thus the head, being free, will swing clear of the spine of the ischium, and seek the same place as it holds in the anterior position, and rotation is completed in the usual manner.

Such being the state of the art in regard to the use and capability of the forceps, and its uncertainty as a means of relief in cases of extreme peril of women in labor, on account of malformation, disease, or accident, and such being the evils in practice growing out of a want of appreciation of its powers and faults, it is not strange that obstetricians should differ as to a choice of means when it is one of them; and it is not strange that they should differ in the use of the instrument, when the instrument, use it as you will, cannot fulfill all the indications of labor. Baudelocque, speaking of labor, says, "The facility of its execution always depends on the union of many causes, and the failure of any one of them may render it difficult, often dangerous, to both mother and child, and even impossible without assistance." A failure in flexion or extension, failure in rotation or any other proper motion of the head, failure in the proper application of power on account of obliquity, and a failure on account of a proper relation of the head and pelvis, play such important parts in delivery, that we must say the forceps, by interfering with all these, often rather impedes than expedites it, and, in spite of the aphorism, there must be efficiency in the instrument as well as skill in the hand that uses it.

In order to obviate the difficulty of fixing the head, and to leave it free to accommodate itself,

as in version and natural labor, and to enable the operator to make traction in the direction of the axis of the superior strait, I propose and have had a pair of forceps made by Mr. Kolbe, which I offer to the profession.



It differs from forceps heretofore used in nothing further than having the fenestrated blades jointed to the shanks at such an angle as will allow the blades to swing in the same line when they are applied to the head. It is so constructed as to allow of the locking of the joints to facilitate the application and correction of the position of the blades. From what has already been said as to the defects of the forceps as heretofore used, I am persuaded that the change in the construction will of itself suggest the principle contemplated.

The forceps being applied in the usual manner, the joint is freed by sliding back the catch. The head becomes at once a link in a chain, commencing with the handles and ending with the distal end of the child,

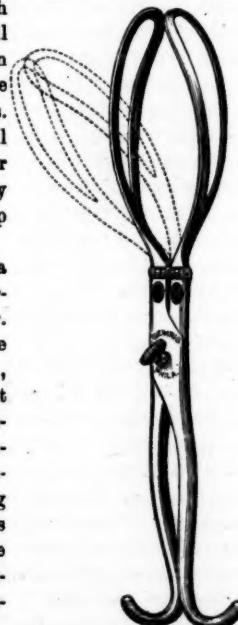
and every link is free to move from any obstruction in the passage, and thereby is enabled to accommodate itself to any open space in the canal; and by making the handles a lever of the third kind, we are enabled to apply force in a direct line and coincident with the axis of any of the planes. For instance, applied to the head at the superior strait, by holding the extremities of the handles in the left hand, pressed together in the usual manner, and with such force as is sufficient to hold them, and making the fulcrum at that point, we apply the force with the other hand, as near as possible to the vulva. We thereby cause the head to flex and descend in a direction controlled by the configuration of the pelvic canal. We do not control the motions of the head, and when it reaches the floor of the pelvis, we change the force to one of direct traction after rotation is completed, and around the sub-pubic ligaments, if necessary; and by paying the least attention to the relation of the handles to the blades, we have the joint as an index to correct any departure from a correct

line. The head being free, any departure likely to take place would be attended by no bad consequences, because the resolution of forces is such that any aberration would be corrected to at least a mean between the resistance of the perineum and the error in the line of traction, which would reduce the error to practically nothing.

By its use I am convinced you can exert sufficient force to extract the child's head, unless the disproportion between the parts is so great as to preclude success, and that, too, without any unnecessary waste of power on the tissues or organs of the mother or head of the child. The head is as free from dangerous compression as in the use of the ordinary forceps. The lock in the joints preserves control over them in application, and leaves them in that respect as other instruments. Being applied, the head is not turned from the least resisting direction, or forced into violent contact with the pelvis; striking any part obliquely, it is free to deflect and accommodate itself to any curve or plane, consequently all the force used is spent to overcome the unavoidable resistance of the parts and moulding the head to the capacity of the canal. It would take too much time to point out all the circumstances in which it would be preferable to others. If appreciated, it will suggest its proper use, and familiarity with it will develop new advantages.

I have also had a pair of straight forceps made, by Mr. Gemrig, on the same principle, so that, when the occiput is at the sacro-iliac symphysis, it can be applied in such a manner that, in rotating forward, the handles can rotate with the head and still preserve an angular relation to the pelvis.

Sir, I would end here; but since writing the above, and on the 29th of October my



friend, Dr. Louis K. Baldwin, called my attention to an article in the *Medical Record*, dated New York, October 27th, 1877, wherein Professor Fordyce Barker is represented as presenting to the New York Academy of Medicine a new forceps devised by M. Tarnier, of France; and although, from what I can gather from the description given of it as made by Dr. Barker, there is no similarity between the instruments, either in the mode of application, of traction, or in the mechanical construction, I owe it to you and myself to refer to it; and I may be permitted to quote from myself to show that as late as two years ago the faults of the forceps were impressed upon my mind, and that my opinions were urged upon others. In an article read before the Sydenham Medical Coterie, of which Drs. Welch, Webb, Holt, Evans, and Baldwin, of this Society, are members, entitled "Modern Obstetrics," I enumerated the same facts and principles as operating against the use of the forceps as I have attempted to present to you to-night. Without going into details, I will only say, I stated, as fundamental facts, in my paper, that the force in extraction acting alone, equals the force of expulsion plus the increased resistance incident to artificially produced positions. That increased resistance endangers the tissues of the mother in proportion to the force required to overcome it. That, it being impossible to ascertain the amount of resistance beforehand, every case of extraction must be, in a certain sense, an experiment. That the fixed position of the child's head in extraction, necessarily making resistance greater, as a natural consequence, does more injury to the tissues of the mother than expulsion."

I will detain you no longer, and will only thank you, sir, and you, gentlemen, for your kind attention to what I have said. I can scarcely hope that all I have said will meet your approval. I did not expect it; but as I have often felt the lack of something in the forceps, and had my doubts as to the correctness of the principle upon which it acted, and have been more confused than enlightened by the statements of others, I attempted to find a path out of the wilderness of discrepancies for myself. How far I have succeeded I will leave the future to determine.

—Both sizes of the *Physician's Pocket Record* for 1878 are now ready.

FRACTURE OF THE HUMERUS, WITH INJURY OF THE MUSCULO-SPIRAL NERVE—SUIT FOR MALPRACTICE.

BY O. B. ORMSBY, M.D.,
Of Murphysboro, Ills.

I am induced to report the following case, for these reasons:—In the first place, I regard the case as one of more than ordinary interest; and, again, it was the occasion of a suit for malpractice. The rarity of the case is indicated by the fact that in an investigation of medical authorities and periodicals, as minute and widely extended as my circumstances would permit, I failed to find a single similar case reported. The nearest approach to it is the statement in "Gross' Pathological Anatomy," that the inclusion of a nerve in the callus thrown out at the seat of fracture is liable to occur. Had I been able to point to reported cases of the same or similar nature, it is probable the suit would not have been commenced, or, in case it had, the defence would have been more easily accomplished, and I should have been saved considerable worry, expense and vexation, besides which I think that, notwithstanding the defence was successful, the very fact of the prosecution of the suit was a damage to my practice. I am tempted to add the statement of one more circumstance, lacking which it is probable no action would have been commenced, and let all young practitioners draw their own inferences regarding the proper line of conduct to be adopted in any similar case. After the adjustment of the fracture, the father of the patient asked me to examine the other arm and give an opinion as to whether it had been subjected to proper treatment when injured some years previously. Upon complying with this request, I found the olecranon process displaced and separated from the ulna by a space of from one and one-half to two inches. I asked whether the limb had been dressed with the forearm flexed or extended, and upon being informed that it was dressed in a flexed position, I unhesitatingly gave my opinion that it had been improperly cared for. (The fracture of the olecranon was the only injury that had then existed.) I was somewhat surprised to learn that this fracture had been adjusted by Dr. —, an old practitioner of considerable reputation in the surrounding country, and a particular friend of the family;

and it has always been my belief that if the opinion (judiciously or injudiciously) given then had been withheld, no suit would have been instituted.

CASE.—November 14th, 1868, was called in consultation with Dr. J. R. D., to see J. G., a child, eight or nine years of age.

Found an oblique fracture of lower third of right humerus, from before upward and backward. The sharp lower fragment had penetrated the muscles and could be felt immediately under the skin. The injury being recent no swelling had occurred, and I suggested the immediate application of the starched bandage. The attending physician approving this course, we proceeded to apply the bandage as follows: The fragments of bone having been carefully adjusted, the forearm was flexed and the entire limb from the fingers to the shoulders enveloped in cotton wadding. A roller bandage was next applied smoothly from the fingers to the shoulder. The outside of this roller was starched after its application, and strips of binders' board were then torn off so as to leave the edges thin, softened in warm water, dipped in starch, fitted to the limb, and over them was placed another roller bandage, the inside of which was starched as it was applied. Extension was maintained by a very simple apparatus, and the case turned over to the attending physician. The next evening, passing near the place, I met the attending physician, and at his request called in with him to see the case. Found it apparently doing well; no coldness of the fingers or other symptom of impeded circulation in the hand; but, as considerable pain was complained of, we decided to cut the bandage sufficiently to relieve the tension, presuming that a slight degree of swelling was the occasion of the pain.

As the light was poor (a common coal-oil lamp, without any chimney), and the doctor's eyesight not so good as formerly, he requested me to cut the bandage, which I proceeded to do to such an extent as to relieve the painful feeling of constriction, after which I saw no more of the case during its treatment, but will complete the account of its further progress from the doctor's evidence before the court. Finding on the following morning the bandage about dry, he decided to remove the extending apparatus, cut out a portion of the dressing, and tie it up with tapes. In doing this, he found that about one-third of one turn of the inner roller bandage,

located in the flexure of the elbow joint and included in the length of the incision made on the previous evening, was uncut. On the anterior aspect of the joint was a blister of the size of a silver twenty-five-cent piece. Circulation in the hand and fingers good. From this time forward the case progressed favorably until the removal of the bandage, when the bone was, in the doctor's opinion, well adjusted, with about the usual amount of callus at the seat of fracture, which judgment was reaffirmed by the experts who examined and measured the limb at the time of trial before the court; but the muscles supplied by the musculo-spiral nerve below the seat of fracture were paralyzed, and the paralysis has proven to be permanent. It was the opinion of the most experienced and best-read surgeon whose testimony was produced before the court that the nerve had been included in the callus, and that it was compressed to such a degree as to destroy its functions, and ultimately its structure. My own opinion was that the lower sharp fragment of bone had severed the nerve, and that ultimately its functions might be restored. Time has proved the fallacy of this opinion. To conclude: are there any similar cases reported, and where? Would the surgeon be justified, in a recent case, in cutting down upon the callus and endeavoring to liberate the nerve?

Any criticisms of the above case, if offered in a friendly spirit, will be meekly received. I may add, in explanation of the minuteness with which a portion of the case has been presented, that the theory of the prosecution was that compression effected by the small portion of bandage left uncut in the first incision had been sufficient to permanently destroy the functions of the nerve, and our answer was that any compression sufficiently severe to accomplish this must necessarily cut off the arterial circulation and produce gangrene.

EARLY PAYMENTS

For the year 1878 will be both a favor to the management of this journal, and will save the always disagreeable necessity of sending out reminders to those in arrears.

The cost of the subscription is but a small sum, easily spared by any one person, but failure of many to be prompt makes a serious difference to the publishers. We trust this word in season will be sufficient.

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HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF WILLIAM PEPPER, M.D..

Professor of Clinical Medicine in the University of Pennsylvania.

Reported for the MEDICAL AND SURGICAL REPO-
RTER.

Graves' Disease.

The University Dispensary has been particularly rich in cases of Graves' disease. Upon one occasion, last spring, I was able to bring five thoroughly marked cases of this affection before you, three of which occurred in boys. The patient to-day is a sewing girl, 20 years old, and a resident of this city. Some years ago she had a severe attack of erysipelas; she has suffered as long as she can remember from palpitation of the heart, and has always been easily fatigued. Her monthlies have lately been irregular; in fact, she has not menstruated at all for the past three months. There has been much leucorrhœa and pain in the back. The girl probably has some uterine disease, and is of a highly nervous temperament. Her thyroid gland is enlarged, and there is a very slight thyroid thrill. There is no exophthalmia, however.

Graves' disease occurs most frequently in females of a pronounced nervous temperament. It may occur, however, in the male. The causes which produce this disease are anxiety, overwork, improper food, and insufficient clothing. In females, the predisposing cause is very frequently some uterine disorder.

The prominent symptoms are protrusion of the eyeballs or exophthalmia, enlargement of the thyroid gland, and disturbed cardiac action. To these is often added marked anaemia. The degree to which these symptoms exist varies in different cases. The exophthalmia and goitre may be exceedingly marked, or scarcely perceptible. The disturbance of the heart's action is generally functional and very marked, with an exceedingly rapid pulse, and sometimes a musical, systolic, blowing murmur, due to anaemia.

Let us consider the symptoms separately. First. As regards the enlargement of the thyroid gland; as a rule both lobes are equally affected. The thyroid gland is highly vascular, and the arteries leading to it are very tortuous. When, then, there is violent arterial over action we should be prepared to find pulsation and thrill over the gland. The nature of the thyroid enlargement points strongly to the view that it is due to a dilated and enlarged condition of the vessels.

The exophthalmia is so extreme in some cases that the globes of the eyes cannot be covered by the lids, and it becomes necessary to

protect them from injury by exposure to air and dust. This exophthalmia seems to be due to the distention of the vessels of the post-ocular tissues, with, perhaps, some hypertrophy of the cellul-o-fatty tissues behind the globe. The disturbance of the heart's action is usually the earliest and frequently the most constant of the symptoms. There is very rarely any organic disease at first, though hypertrophy may subsequently supervene. If there is anaemia coexistent, it is not unusual to find anaemic murmurs at the base of the heart.

In looking for a common cause for the three symptoms above mentioned, it is probably to be found in a morbid condition, with enfeebled activity of the cervical ganglia of the sympathetic and of the cardiac plexus of nerves. In a few cases actual lesions of the nervous ganglia have been found. There are a few special symptoms occasionally present, which can be explained in the same manner, such as sudden flushing of the face, with violent throbbing of vessels, and sensations of fullness, or vertigo; local unilateral sweatings about the head; local modifications in nutrition, such as irregularities in the growth of hair, etc.

The diagnosis of Graves' disease can present but few difficulties if attention be paid to the characteristic features above noted. It is really a very curable affection in many instances, provided it come under treatment at an early stage, and the hygienic conditions can be rendered favorable. Even when cure cannot be effected, the troublesome symptoms can be held in check.

In the treatment, care must be had in the removal of the causes, and in securing rest, good food, change of scene, and entire release from anxieties. The various functions must be attended to, and any local disorder in females removed by suitable treatment. The best remedies are iron, digitalis, ergot, and bromide of potassium. Digitalis is the most valuable remedy for controlling the functional disturbance of the heart. It may be given in doses of from ten to fifteen drops, three to four times daily. Iron is also very useful. I shall order this patient from ten to thirty minimæ of dialyzed iron, three to four times daily. The iron may be combined with the digitalis. Ergot may be given internally, with a view to influencing the contractility of the walls of the arteries. I have obtained most excellent results from the injection of diluted ergotin into the substance of the enlarged thyroid gland. The needle may be introduced to the depth of half an inch, or an inch, and from six to ten minimæ of a solution, containing ninety-six grains of ergotina to one fluid ounce of distilled water, injected.

Bromide of potassium is frequently called for, partly on account of the general nervous condition, but chiefly to assist the digitalis, or ergot, in controlling the irregular action of the heart and arteries. In the present case I shall ask my colleague, Dr. Goodell, to make a uterine examination, and see if any local disorder there can be discovered.

Rachitis.

This little thing is five years old, and was brought to the hospital some time ago by her mother. It was found impossible at that time to secure any reliable history of the case. All we could find out was that the mother, just before the child was born, had ulcerated sore throat and falling of the hair. This she attributed to an attack of diphtheria. It may have been due to diphtheria, but was more probably due to something else.

The child had always been a delicate, weakly, little thing, with impaired intellect. It presents the typical symptoms of rachitis. The changes in the bones are most marked. The head is extraordinarily large; the forehead high and broad, with two large, projecting masses of bone at the frontal prominences. An enormous ridge has taken the place of the sutures on each side. The parietal bone is unusually thickened. The thickening is most marked along the sutures. Thus I can trace out a ridge of bone marking the site of all the sutures of the head. These are the chronic rachitic changes in the bones of the head. The extremities of the long bones are affected in the same way. This is particularly true in the case of the radius and tibia. The styloid process of the radius is as large as that of a boy of fifteen. So, too, with the tibia. At the junction of the shafts of the ribs with the costal cartilages on each side there is a row of bony prominences.

Rickets begins in early infancy. The symptoms noticeable before the occurrence of the above typical changes in the bones are the following: a great indisposition to being moved about or played with on the part of the child. It is very slow to learn to walk; if it had already begun to learn, it stops short. Its bones are the seat of great tenderness, so that any handling at all makes it cry out. It is feverish at night, kicks off its bed clothes, and lies in its bed without anything on of a cold night; the pillows, too, are found drenched with sweat. This sweat is generally cephalic, but may extend to the whole of the body. The child's dentition may be fair, or it may be retarded. Such a child is very liable to continued irregularity of its bowels; to constant catarrh. Among the bony lesions the beads at the junction of the ribs and costal cartilages are the first to be noticed. Then comes the enlargement of the extremities of the long bones. The bones of the head are usually the last to be affected. Owing to the imperfect deposition of the salts, not only may the course of the sutures be marked by prominences, but you will very often find soft spots or holes in the bones of the cranium, where the skull yields easily to pressure. These soft spots are very characteristic. I do not, however, find any of them in this case.

Rickets is a very curable affection if taken in hand in the early stages. The treatment of it consists in plenty of sunlight, fresh air, good food, warm clothing, cod-liver oil, phosphates

and the hypophosphites, iron and quinia. Of course particular symptoms must be attended to. If there is indigestion, some bitter tonic should be combined with the quinia.

I forgot to mention, in its proper place, that there is considerable enlargement of the spleen and liver in this case. The severer symptoms, or rather sequelæ of rickets are albuminoc degeneration of the liver, and chicken-breasted deformity.

Some Cases of Cardiac Diseases—Their Diagnosis.

CASE 1.—J. McK., male, fifteen years of age. Has been complaining of palpitation, dyspnoea, and flushings of the face for the past four or five years. About two years ago had a severe attack of rheumatism. No dropsy and no swelling of the feet or of any other part of the body. His heart to day is very rapid; pulse running 124 to the minute. The heart's action is violent, and the apex-beat is too far down and too far to the left. The impulse is heaving. Both sounds of the heart are diseased. The murmurs are very weak at the point of the heart. There are no murmurs heard upward and to the left, but upward and to the right they are heard very strongly. The murmurs are transmitted into the aorta and carotids. This is a case of double aortic disease, stenosis and regurgitation.

CASE 2.—P. S., male, 40 years of age. Has been suffering for four years from sharp pain over the heart, dyspnoea and palpitation. I find, upon auscultation, two murmurs, one synchronous with the carotid and the other with the radial pulse. The natural sounds of the heart are entirely obscured in this case. The murmurs are but feebly heard at the point of the heart. The first murmur is transmitted round to the left; the other, which is of a duplex character, is heard loudly in the carotids and in the bronchials as low down as the elbow. This is a case of double aortic and of mitral disease, aortic stenosis and regurgitation and mitral regurgitation.

CASE 3.—L. P., female, 15 years of age. Had pain in shoulder for first time two months ago. This pain is worse in damp weather. No cough; appetite good; father has had rheumatism; no swelling of the feet, but good deal of epistaxis. For past two years has suffered from shortness of breath and palpitation, headache, dizziness and slight symptoms of dyspepsia.

CASE 4.—M. O'B., 11 years of age. For two years past has been complaining of pains in joints. More recently there has been palpitation of the heart and shortness of breath. Has been having obscure attacks of rheumatism for past two years. We must remember that rheumatic attacks are very often overlooked in young children. The case is treated as one of simple, continued fever, teething, or indigestion, and nothing thought of the rheumatic trouble until, four or five years afterwards, perhaps, we find that the patient has some form of heart disease. Both of these cases (3 and 4) are instances of mitral regurgitation. The murmur

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in both cases is systolic, synchronous with first sound of heart, and transmitted round to the left.

I want to say a few words to you with regard to the symptoms and diagnosis of heart disease. Our first duty when disease of the heart is suspected is to examine both heart and lungs carefully. The two most constant symptoms of heart disease are shortness of breath upon exertion, and palpitation. There may be, in addition, dropsey, epistaxis, and cough, with spitting of blood.

First, as regards the dyspnoea. It may be constant, and it may only occur upon exertion. This symptom is always present in serious organic disease of the heart or lungs, and is due to the imperfect oxidation of the blood, owing either to passive congestion of the lungs from mitral disease, or to the fact that the action of the heart is so rapid that the blood has not time to be oxidized in its passage through the lungs. Palpitation, just like dyspnoea, may be constant, or only occasional in cardiac diseases. It may be caused either by the imperfect filling of the cavity of the heart, or by the fact that the heart is always engorged and always struggling to expel the blood. Where there is a nervous element in the case the palpitation may be due to disturbance of the cardiac flexus, or positive degeneration of those nerve centres. Dropsey is only present in the later stages of heart disease, and in most cases is due to a mechanical damming back of the venous blood. This obstruction may be so great as to cause rupture of the walls of the veins, and hemorrhage, instead of leakage of serum.

In making a careful diagnosis of heart disease you must begin by examining the heart. Thus let me take Case 3, for instance. I find slight fullness of the praecordia. The impulse is felt as high up as the third rib, as far down as the sixth, and from the edge of the sternum out to beyond the line of the nipple. In this instance

the area of heart dullness is three inches up and down, and two and one-half inches transversely. The normal limits of dullness are not so great. This tells me at once that something must be wrong. Let me try auscultation, as it is the most accurate physical method. I begin by listening over the head of the third rib on the left, because that spot is close to all the valves of the heart. By listening here I can distinguish a very marked murmur. (The Professor at this point entered into a long description of the character of the two normal heart sounds.) In both these cases (3 and 4) the murmur is synchronous with the first sound of the heart.

We have determined that there is a murmur, and also that it is synchronous with the first sound of the heart, but the point now arises, where is the murmur produced? Let us note in what direction the murmur is best carried. This is always the direction in which the blood is passing through the diseased valve. In this case I cannot hear the murmur at all at the aortic cartilage, and but feebly at the pulmonary cartilage. At the point of the sternum it is scarcely audible. Evidently there is no aortic, and no tricuspid disease. It is distinctly audible at the point of the heart, and is transmitted round under the left arm, and distinctly heard at the lower and posterior angle of the left scapula (this point corresponds with the apex of the heart in front). Let us see, now, where we are. We have heard a strong, blowing, systolic murmur, which is synchronous with the first sound of the heart, and is heard most distinctly at the point of the heart, and is transmitted round under the left arm and heard at the posterior, inferior angle of the left scapula. *It must be a mitral regurgitant.* In the same way I might go through Cases 1 and 2, but I hope you have seen enough to understand the method of physical diagnosis in cases of cardiac diseases. At some future time I shall have something to say to you about the treatment of these diseases.

EDITORIAL DEPARTMENT.

PERISCOPE.

On Dental Caries.

Mr. A. Stewart writes to the *British Medical Journal* :—

The general prevalence of dental caries is chiefly owing to food remaining on and between the teeth after meals—from breakfast time till the following morning—when, according to custom, the teeth are brushed; brushed, but probably not cleaned, as the brush is more often used to polish the surface merely than to assist in removing what has accumulated

between them. Experiments have been referred to that prove the solvent action of weak acids on the teeth; and I think it will be conceded without proof that, were portions of our ordinary food, mixed and moistened as in mastication, kept during the night at the high temperature of the mouth, the compound would be sour. It follows that dental caries must continue to prevail as now, while it is the custom to allow the food to remain in contact with the teeth all night.

The following observations show the dependence of caries on food remaining in contact with the teeth. When the teeth are wide apart

food is not retained, and they generally remain free from caries. The lower front teeth are seldom attacked by caries when, as is generally the case, the spaces between are closed to the entrance of food by tartar. The backs of all the teeth, upper and lower, being kept free from food by the tongue, are seldom affected by caries. Lodgment of food takes place between the bicuspids, between the molars, in the depressions on the masticating surface of these teeth, and on the buccal walls of the molars, and these are the chief seats of caries. While mastication is performed by the molars and bicuspids, the upper front teeth remain free from food and from caries; but, when they themselves are made to do the work of lost or diseased molars, and the food gets between them, caries is certain to follow before long. Further proof cannot be required that, if no food remained in contact with the teeth after eating, they would be free from caries, unless acted on by acidity from other sources. The only indications, therefore, for the prevention of dental caries are the neutralization of acid applied to the teeth and the removal of food before it has become acid. The food should be removed after every meal, and all who have not the opportunity of doing so should not fail to remove it thoroughly every night at bedtime by rinsing, as the brush cannot be trusted to remove the food from between the teeth.

On Temperature in Connection with Fever.

Jobbe Duval and Landriaux, quoted in the *Doctor*, point out that in pleurisy and pneumonia the temperature of the affected side is always much higher than that of the other. Wegscheider observes that while the temperature of the axilla in fevers, and especially in typhoid, is considerably higher, that of the extremities and surface of the skin is lower than normal. Litton, of Berlin, having made researches into the action of elevated temperature on the organism, by keeping guinea-pigs in boxes with a surrounding temperature of 118° F., found that they died in a few days, and that there was fatty degeneration invading the following organs in varying intensity, indicated by the order in which they are stated:—the liver, the kidneys, the heart, the striated muscles (diaphragm and intercostal muscles), and finally the glands of the stomach.

Treatment of Ruptured Perineum.

Dr. G. W. Hutchinson, in a paper in the *Doctor*, gives this case:—

Mrs. F. H., aged thirty-two, a primipara, was confined on the forenoon of February 1st, 1877. She had a very hard, dry labor, the perineum being very thick and unyielding. The head, notwithstanding the long labor pains, having remained at the pelvic outlet for several hours, the forceps was applied, and gentle traction employed. In spite of the greatest care in its use, although the perineum was well supported,

and although the instrument was removed before the birth of the head, which came into the world without doing any mischief, the shoulder came straight through the perineum, rupturing it right up to the sphincter ani, which fortunately escaped, leaving a rent two inches deep and three long. With the assistance of a medical friend, within half an hour of the occurrence I stitched the parts together with two deep silver-wire sutures, which went right under the bottom of the wound, and bound the thighs together at the knees, the patient being strictly enjoined to keep on her side, and to remain as motionless as possible. To soothe generally, and to keep the bowels quiet, I prescribed half a grain of opium every hour. I drew her urine off twice a day. Four days after she had a slight attack of cystitis, which readily yielded to treatment. The pad and dressing were removed on February 5th for the first time, and on the 6th, the bottom part of the wound having united, the superficial portion of the wound being a little sloughy, the sutures were removed, and the wound dressed with red lotion. On the 7th the bowels were moved for the first time, the result of a small dose of castor oil, without interfering with the wound. The catheter was now disused. Patient was kept in bed a week longer, by which time the wound had quite healed. She assures me that she now suffers no inconvenience whatever from the accident.

I believe the case would have done better had two or three superficial sutures been used, as well as the deep ones. These unfortunate cases are very often a source of great annoyance to both patient and doctor, but I believe that, in immediate action, which the above case well illustrates, we have an almost never-failing remedy.

Diagnosis of Intestinal Obstruction.

Mr. C. F. Mauder says, in a recent lecture—On being called to a case of intestinal obstruction, the surgeon should first determine whether the cause be without or within the abdomen, and should therefore ascertain the presence or absence of external hernia by a careful examination of its common and uncommon sites. Hernia being absent, he must endeavor to define both the nature and seat of the obstacle, because the former will often point to the latter, and to these ends the history of the case will very materially tend. It is generally accepted that when the symptoms set in suddenly and with severity, the patient having apparently been previously in good health, an acute strangulation of some portion of the bowel, most frequently of the small intestine, but occasionally of the sigmoid flexure, has occurred, and serious pathological change is imminent. On the other hand, when the history is more or less prolonged, a climax being at length reached, in the shape of complete, or almost complete, obstruction, and with or without vomiting, the obstacle will

be found in the large intestine, either in the shape of stricture involving its coats generally, or of some tumor encroaching upon its channel. This classification must not be regarded as absolute, though in a general sense, trustworthy, because it will be at once evident that a gradual narrowing of the small intestine at some point will give rise to a prolonged history, as in stricture of large intestine; while a sudden twist or strangulation of the large bowel would be attended by sudden and acute symptoms, such as are generally associated with small intestines.

Case of Complete Obliteration of the Aorta.

At a late meeting of the Pathological Society of London, Dr. Legg showed an example of complete obliteration of the aorta, just in the neighborhood of the ductus arteriosus. The subject of it was an adult who had died suddenly from rupture of a dissecting aneurism of the aorta into the pericardium. The vessel was completely obliterated for about a quarter of an inch just beyond the ductus arteriosus, which persisted as a ligamentous cord, pervious, for a short distance, to a bristle. The circulation was carried on by the anastomoses between the internal mammary and other branches of the subclavian with the epigastric and intercostal vessels. Dr. Legg believed that as many as eighty such cases had been recorded, and he referred to the two existing theories as to the mode of origin of the constriction. The one view is that it depends upon some condition of the ductus arteriosus, and the case of a child is recorded in which a thrombus was found extending from the ductus into the aorta. The other view, that of Rokitansky and Peacock, is that it is dependent rather upon an original vice of development, and Dr. Peacock had shown that it frequently went with other malformations, such as deficiency in the ventricular septum, or the presence of only two aortic valves, as in the specimen exhibited.

Researches and Experiments on a Woman with a Gastric Fistula.

In this case Duchek, of Vienna, quoted in the *Doctor*, found—

1. Normal digestion. That of breakfast lasted about four hours, of dinner seven, of supper seven to eight hours.

2. Influence of the menses. From the beginning of these there was no neuter reaction during the day, the stomach thus acting continuously except for two or three hours during the night.

3. Influence of alcohol. This always delayed digestion. Infusion of coffee had the same effect. Pepsine did not hasten digestion in the least. Distilled water did not bring on an acid reaction.

4. Transformation of alcohol in the stomach. It was generally transformed into aldehydes.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

—Under the title, "What Anæsthetic Shall we Use?" Dr. J. J. Chisholm, of Baltimore, urges with great force the value of chloroform. He says: Believing, as I do, that ether and chloroform will not prove dangerous if a pure drug is selected and carefully administered, except in these extremely rare cases of idiosyncrasy when both will prove toxic in like proportion, then, in the comfort of the administration, both to the patient and the surgeon, ether, in my opinion, is not to be compared to chloroform as a general anæsthetic, and can never take the place of the latter. The wave of professional opinion must move back toward a returning confidence in the safety of chloroform, which many surgeons who administer it continually have never had shaken.

—The very able and thorough review of the "Progress of Medical Jurisprudence in the United States," by Dr. Stanford E. Chaille, read by him before the International Medical Congress, has been reprinted in pamphlet form. It is of equal interest to lawyers and physicians. For copies, address the author, New Orleans, Louisiana.

—The Arkansas *Medical Record*, a monthly journal of practical medical literature, and devoted to the interests of the profession and the people of Arkansas and the Southwest, will appear regularly on and after January 15th, 1878. The editor will be Dr. James I. Hale, of Little Rock.

—Stricture of the Urethra, When and How shall we Perform Internal Urethrotomy. By Claudio H. Mostin, M.D., LL.D., Mobile, Alabama. From November number Richmond and Louisville *Medical Journal*. A very interesting and valuable contribution to this department of surgery.

—Transactions of the Wisconsin State Medical Society, 1877. Containing a number of interesting and able articles.

—Report of a Successful Case of Caesarean Section after Seven Days' Labor, with Some Comments upon the Operation, by Edward M. Jenks, M.D., Professor of Medical and Surgical Diseases of Women, and Obstetrics, Detroit Medical College, etc. Reprinted from The

American Journal of Obstetrics, and Diseases of Women and Children, Vol. x, No. iv, October, 1877.

—Pyæmia and Septicæmia. By B. A. Watson, M.D., Surgeon to Jersey City, Charity and St. Francis Hospitals. Reprinted from the New York *Medical Journal*, October and November, 1877. A well-written and interesting consideration of the subject, covering 52 pages.

—A Series of American Clinical Lectures, edited by E. C. Seguin, M.D. Vol. iii, No. v. Whole No. 29, Points in the Diagnosis of Hepatic Affections, by E. G. Janeway, M.D., Physician to Bellevue Hospital, etc. G. P. Putnam's Sons, New York, 25 cents. We recommend this number to all interested in the subject under consideration.

—Physicians' Pocket Case Record and Prescription Blank Book. Robert Clark & Co., Cincinnati. A physician must certainly have no excuse in these times for not keeping a record of his cases, when such facilities are produced for him as the neatly bound and prepared volume before us. From the same source we receive a smaller book, intended for the pocket, and differing from the above in being more adapted to the pocket, and containing also a visiting list. Such a book lightens a physician's pocket, the weight of this latter volume being only four ounces.

—Should Comparative Anatomy be Included in a Medical Course? By Bert G. Wilder, M.D. Reprinted from the New York *Medical Journal*, October 1877. A pamphlet worthy of careful perusal by all who are anxious for a higher standard of medical education. His conclusion in regard to Comparative Anatomy is, that it should, for the medical student, be restricted to such forms and topics as may aid his special studies.

—Annual Report of the State Hospital for Women and Infants, 1718 Filbert street, Philadelphia, Pa.

—As evincing the close interest that Englishmen take in questions of hygiene, "Glen's Law of Public Health and Local Government" has passed through nine editions.

—Hemipia and Decussation in the Optic Chiasm. By George C. Harlan, M.D., Surgeon to Wills Hospital, etc. Read before the College of Physicians of Philadelphia, July 4th, 1877. Extracted from the Transactions of that body, Third series, vol. III.

BOOK NOTICES.

Vital Magnetism—Its Power Over Disease. A statement of the facts developed by men who have employed this agent under various names, as animal magnetism, mesmerism, hypnotism, etc., from the earliest times down to the present. By Frederick T. Parson (Magnetic Physician). New York, Adams, Victor & Co., publishers, 1877. 1 volume; 8vo, cloth. pp. 235.

We confess to having opened this book with a strong prejudice against it, which was not diminished on reading the title page. But after giving it a pretty careful examination we are bound to say that our prepossessions were largely modified. It is made up chiefly of extracts from generally good authorities in reference to the peculiar force which the writer discusses, with especial reference to its value as a curative agent.

It has long been acknowledged by every one who has given the subject unbiased attention, that there is a powerful influence of the kind in question. Committees of the most learned scientists have tested and proved it, physicians and surgeons have at times employed it with striking alleged success, and, as affording curious amusement, it has repeatedly been exhibited on the public stage. Just what we are to call this influence, just where to range it with other forms of force, scientists are not agreed. Obscure and irregular in its manifestations, and often used to deceive the credulous, and aid charlatany, investigations concerning it are looked on with suspicion, and have fallen into bad odor. That it is, for all that, a real and an effective force, must be conceded.

The author of this volume has done well to collect the evidence of its therapeutic value. That he over-estimates it is very probable; but he presents the subject with judgment, and we have not remarked that he obtrudes himself or his own special powers in an offensive way. He claims that the magnetic practice need not, and ought not to come into competition with medical practice of any school, nor exclude medical science in any form, but should be accepted as one of the physician's most powerful aids. Its proper field of application is more specifically within the line of nervous diseases where medication has failed to afford relief."

He asks for unbiased investigation, and it is certainly a field worth more study than has been given it of late years by the regular profession.

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Editorial.

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THE

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From and after the first of October we are offering to all new subscribers the REPORTER for fifteen months (October 1, 1877, to January 1, 1879) for five dollars, one year's subscription price.

That our old subscribers may also receive an equally liberal offer, we make them the following proposition.—

Any old subscriber who will send us one new subscriber to the REPORTER, remitting ten dollars to cover the two subscriptions, will receive the Physician's Daily Pocket Record for 1878, or the Half-Yearly Compendium for 1878, gratis, as he may prefer.

Any old subscriber who will send us a new subscriber to both REPORTER and COMPENDIUM, remitting twelve dollars to cover both subscriptions, will receive a copy of either Napheys' Medical Therapeutics, or Napheys' Surgical Therapeutics, as he may prefer.

THE CHANGES IN MEDICAL PERIODICAL LITERATURE.

The demise of most medical journals hardly calls for extended comment. Started to advertise some college, or the medical works of some publishing house, they have no hold on life beyond this, and rarely rise to any standing with the profession at large. But it was with positive regret that we read the announcement that the ably conducted quarterly, *The British and Foreign Medico-Chirurgical Review*, published by the Messrs. Churchill, of London, was discontinued with its October number. In their notice of this cessation, the publishers make some very just and pregnant remarks on medical literature in general. The following is an extract:—

"The standard position of the *Review* has been again and again attested by the importance which anxious authors have been wont to attach to its critical remarks upon their literary productions. But in the present day he who would succeed in life must mark the signs of the times. For several years we have witnessed the gradual decline in sale of that which once was a good property, and, in spite of all our efforts to infuse new life into our old friend, we have been obliged to stand by and see it languish, so that the period has at last arrived when to continue to publish it would be to incur an annual loss which would rather increase than diminish as time went on. The reason of all this is that the day for quarterlies is gone by, and, in the face of the daily and weekly periodicals, a quarterly, with its thoughtful articles and well digested reviews, is no longer appreciated as formerly. This remark applies, we may state, not less to general than to medical literature."

Commenting on this event in its more general aspect, the *Lancet* exclaims:—

"The days of quarterlies are gone! With the demise of the *British and Foreign* we think we hear the knell of others, be they medical, philosophical, or general. In these bustling times we cannot, at least we fancy we cannot, wait three, six, or even more months for a judgment; subjects now are old and threadbare long before they find a place in a quarterly magazine. Apparently it is nothing to the point that in publications of this class greater facilities exist for displays of learning, and of careful and elaborate criticism. The Nineteenth century people, in every station and walk in life, find that they can dispense with these without feeling the worse for it."

While the fact is here most pointedly stated by these experienced authorities, the explanation of it is deficient. It is not that the present generation of medical men is less thorough, less reflective than the last. Look at the enormous and rapid progress constantly making in pathology, chemistry, all branches of science.

The reason is that with the incomparably greater facilities for intercourse, with mail matter traversing an ocean or a continent in a week, telegraphic matter in an hour, any science concerned with the immediate progress of man demands more than a quarterly summary; any scientific student or practitioner will find himself distanced who depends on such a slow-footed bringer of news. It is our energy, not our superficiality, which finds the tardy quarterly medium which satisfied a slower generation altogether short of our wants.

Whatever the explanation, the fact is the same. Nothing short of a weekly journal meets the wants of the intelligent physician of to-day. He wants one, moreover, which is alive to present issues; which is bound neither by prejudice nor interest to give one showing to a question only; which is independent but not partisan; which takes sides in earnest, but gives opponents a fair hearing; which is not a vehicle for personal dislike nor adulation, but which does not hesitate to attack when there appear good grounds for attack; to praise when merit is visible and positive.

Again, the great mass of the profession are tired and disgusted with barren theorizing. Long discussions on pathology and the action of medicines have worn them out. What they want is the real, the positive, the practical. Schiller gave the watchword of the century, *Grau ist alle Theorie*. The less of it the better. We want facts and the solid truths they teach us, not the fine-spun webs of this or that professor's brain. Brief, pointed articles on practical topics, coming often and well varied, make up the journal of to-day as it should be.

NOTES AND COMMENTS.

The Management of Vicarious Hemorrhage.

The eminent Parisian surgeon, M. Maisonneuve, thinks that much harm may be done by meddlesome interference in these cases. He cites the case of a woman who for six years had been subject to vicarious attacks of haematemesis, and in whom medical treatment considerably increased the quantity of blood vomited, and threw the patient into a profound state of anaemia. In short, if there are cases where active interference is necessary there are others where it is prejudicial. Medical treatment is advisable in all cases in which the benefit expected from it is greater than any harm it may do, as—1. In all cases where the loss of blood and the gastric disturbance threaten the life of the patient, or make the patient so weak that life is a burden to her. 2. Also in those cases in which the supplementary hemorrhage has been only recently established, and has therefore, not degenerated into a morbid habit.

Sims on Lister's Process.

Our eminent countryman, Dr. Marion Sims, has written a letter to the *British Medical Journal*, strongly endorsing Prof. Lister's theories, and inquiring why his practice is so little used in the United States and elsewhere. He rightly states that it is because it is so complex and costly. He prefers a combination of it with Guérin's raw-cotton method. He says:—

For the last ten years I have used plain, clean, dry cotton wool as a dressing for the abdominal section in ovariotomy, and I can truly say that no other dressing will compare with it. To kill atmospheric organisms in a glass flask with a long narrow neck, we apply heat and close the open neck of the flask with cotton wool, and nothing else, and it protects the contained fluid against all change indefinitely. About this there is not the shadow of a doubt. And to kill atmospheric organisms during surgical operations, we use carbolic acid, dilute sulphurous acid, or other germicide, in spray, and with absolute success. Now, if at this stage of the operation we could simply cover the wound over with cotton wool, as we do the mouth of the purified flask which contains putrescible fluids, it would save us a great deal of time, trouble, and money. If the cotton wool "does not permit the entrance either of the yeast-plant or any other form of dust" in the one instance, why should it in the other? If the cotton wool filter the air from its im-

purities as it passes through a glass tube, why can it not do the same thing under other and all circumstances? If the carbolized textures used in Lister's dressing are absolutely essential to protect wounds against the entrance of atmospheric germs, why, then, should they not be equally essential to protect the open-mouthed purified flasks against their entrance? But Professor Lister has proved in hundreds, nay in thousands, of instances that cotton wool, unmedicated, uncarbolized, is alone sufficient to protect the contents of purified flasks against putrefaction, and it now remains for him to prove whether cotton wool is or is not alone equally effective in protecting surgical wounds against the entrance of atmospheric organisms. But it may be said this point has been already established by Guérin, at Paris, and James R. Wood, at New York. However, they have not made their experiments on the theory of antisepticism. They have not used the carbolic spray at all. If they have achieved such good results with cotton wool alone, without the carbolic spray, what may not be accomplished with the spray and cotton wool dressing conjoined?

Ovarian Dyspepsia.

At a meeting of the Harveian Society Dr. Milner Fothergill described a form of dyspepsia combined with leucorrhœa, and commonly, too, with menorrhagia, which depended upon morbid conditions of one or both ovaries. Experiment had shown that irritation of the sympathetic nerves of the stomach produced contraction of the gastric arterioles and defective secretion of gastric juice. In aggravated cases, there was vomiting of a reflex character, as seen in the early months of pregnancy and in calculus of the kidney. This form of dyspepsia was very intractable, unless its causal relationships were remembered and borne in mind in the treatment. Blisters over the ovary, with bromide of potassium and sulphate of magnesia internally, were more effective than bismuth and hydrocyanic acid. The gastric condition was not primary, but reflex.

Experiments with the Tapeworm.

Some doubt has hitherto existed concerning the identity of the tapeworm in men and in pigs. To solve the question, M. Redan made several experiments on himself, the results of which M. Milne Edwards communicated to the Academy of Sciences. Having found some cysticerci in the body of a subject at one of the Lyons dissecting rooms, he swallowed four portions of the worm in warm milk, and gave several other cysticerci from the same subject

to a number of pigs and puppy dogs. The former animals died of enteritis; the dogs, when killed and examined, presented no trace of the entozoa. But three months afterwards M. Redan discovered in his stools the proglottis and ova of a taenium, which were soon followed by the expulsion of a complete section. M. Redan, therefore, concludes that tapeworm may exist in man without the ingestion of a transitory form derived from pork.

Opium in Intestinal Obstruction.

An English exchange states that Dr. Leriche, of Maçon, has found the hypodermic injection of morphia of great service in cases in which all other means had failed. He found that the injection of atropine did more harm than good. It gave rise to delirium, and failed in provoking the least evacuation. Morphia, on the contrary, appeared to have a marked effect upon the production of stools, the action of enemata and of purgatives being promoted in proportion to the largeness of the dose administered. Indeed, in these cases the morphia should be given in large doses.

Artificial Atrophy of the Globe of the Eye.

La France Médicale, September 29th, thus describes the method employed by Professor Schulck to produce the above condition:—

A small filiform seton is passed into the vitreous body and left in position from four to six hours; when withdrawn it is followed by a slight degree of chymosis. Atrophy begins after the operation. This method has been employed in very different cases—hydropthalmos staphyloma, cyclitis—and no inconvenience has been experienced from it. The adaptation of an artificial eye is also rendered easier.

Pneumonia in Children.

Dr. W. Squire, of London, read a paper recently on some cases of pneumonia in children. He said it was a comparatively common disease in children; but it was not like bronchitis, a disease of cold weather, but of spring and autumn. He spoke of simple lobar pneumonia. He then gave the chief indications, and laid special stress on a rise in the frequency of the respiration in comparison with the pulse-rate. In one case, a temperature of over 104° Fahr. was reached, yet the child recovered. In another, the respirations amounted to 100 per minute and the pulse to 200. In young child-

ren the prognosis largely turned upon the extent of the lung involved. As to its pathology, pneumonia was rather a disease of the blood than of the respiratory tract. Pneumonia and pleurisy were often closely associated. The treatment consisted chiefly in hygienic measures, as keeping the child quiet in bed. Depressant remedies were not usually well borne. Mercurials should never be used, except as occasional aperients. Alkaline drinks were good. It was a matter of great moment to secure sleep. It was a disease of high temperature.

A Substitute for Litmus Paper.

As a substitute for ordinary test paper, Dr. E. Luck draws attention to a new substance, phenol-phthaliein, which may easily be prepared by heating phenol with phthalic anhydride and concentrated sulphuric acid. This body is entirely colorless in neutral or acid solutions, but exhibits an intense purple color in the presence of the least excess of alkali. The change of color is instantaneous, and its depth intense, so that even mere traces of the indicator and of an alkali become recognizable.

CORRESPONDENCE.

Talipes Equino Varus.

ED. MED. AND SURG. REPORTER:—

Two cases answering to the subject of this communication having recently fallen into my hands for treatment, and thinking it may not prove wholly uninteresting to your readers, I will make a report of the method of treatment made use of, and its results in these cases. I do not claim that this method is new, nor in any sense original with me, but cite it as a testimonial, if I may be allowed to use that term, in favor of the plan referred to.

Case 1 was an infant two months old at the time I commenced the treatment. This was a case of congenital talipes of the variety above spoken of. In this case the contraction of the tendons was not so great but that the foot could be brought into its normal position without causing much, if any, pain; therefore an operation was deemed unnecessary, and the following described appliance adjusted. The appliance is virtually an artificial muscle, which is made use of in these cases, to take the place of the peroneal muscles, which are dormant as regards their function of contraction. It consists of a fan-shaped piece of adhesive plaster, cut into strips half an inch wide, to within two inches of its smaller end, and long enough to completely encircle the foot. Attached to the

apex of the plaster is a strong piece of elastic tape, long enough to reach from the foot to the knee. There is also a collar made of leather, with a buckle attached to its lower border, to fasten around the thigh just above the knee. The plaster is applied to the foot with the apex of the fan over the ball of the little toe, while the strips are carried smoothly over the foot, from within outward. This is to be bound on with a roller bandage, and the foot brought into position, and the elastic tape fastened to the buckle in the collar. The tape can be tightened as the necessities of the case require, and the child will kick itself straight. The treatment of this case was begun about the middle of July last, and the result is all that can be wished for. The appliance will have to be kept on, however, until the child begins to walk.

Case 2 is a brother of the former patient, aged five years. The deformity is precisely the same as that in Case 1, with the addition of an arrest in the development of the muscles and bones of the affected limb. In this case the foot could not be brought into its natural position by any reasonable amount of force. The operation of tenotomy was accordingly performed, by dividing the tendo-achillis, and the tendons of the tibialis anticus and porticus muscles. Three days after the operation the appliance above described was adjusted, and in a week afterward the patient allowed to run about. This operation was performed October 26th, 1877. I have made use of the electric current every other day, through the atrophied muscles. The patient is also taking a thirty-second of a grain of strychnia three times a day. The results of this case at the present time are such as to leave no doubts as to the ultimate recovery with a perfect foot and limb, with the exception of a slight degree of shortening of the leg as a whole.

The occurrence of these two cases in the same family, and that of Case No. 1 under peculiar circumstances, brings up the question of maternal impressions received during gestation, as affecting the offspring. While the mother of these children was six months advanced in pregnancy with the child that afterward figured as Case No. 1, the father took the other patient and carried him across the mountain, to a farmer, who told him he could cure the child. He, therefore, left the boy and came home, and told the mother that her boy was to remain away from home six months, for treatment. This announcement so grieved her that she slept very little for a whole week, but continually mourned the absence of her boy. Now, whether this can justly be considered as any proof bearing on this question, we leave it to your readers to judge. But, be that as it may, it seems to me that the evidences are too conclusive to be mistaken, in very many cases, that maternal impressions do at many times materially affect the offspring in the various ways known as mothers' marks.

Bethel, Vermont. L. M. GREENE, M. D.

Silver Plate in the Skull.

ED. MED. AND SURG. REPORTER:—

In reporting a case in the November 24th issue of your journal, Dr. Snively says he used a silver plate on a place where the brain exuded. In my experience I have had one case where the skull on the upper and back part was fractured, and a "teacupful" of brain was said to have been lost, and there is now a spot, one and a half inches, without any bony skull. He is a bright boy, and seemingly none the worse for his brain loss.

Last August, Dr. Crawford, of Wanbeck, and I removed both tables of the depressed calvaria, for over two inches in diameter, in a boy eleven years old, with a good recovery. I was asked, I can't tell how often, whether we put a silver plate over the opening. We did not, and I don't remember seeing anything in particular on the subject until this case of Dr. Snively's. Now I would like to know whether Dr. Snively was successful in keeping the plate *in situ* until it healed over? And whether, in good surgery, the foregoing cases could and should have had plates? I know that some information on the above subject will be thankfully received by a good many country doctors out this way.

H. W. SIGWORTH, M.D.

Anamosa, Iowa, November 26th, 1877.

Death from Rupture of the Heart.

ED. MED. AND SURG. REPORTER:—

I was called, October 27th, 1877, to make an examination of the body of Michael Cade, a young man twenty-eight years of age, who was found dead in front of the barn at the place he worked. He was discovered about six o'clock in the morning, lying on his face, and had been dead some time, as he was partially frozen. He was a strong, muscular man, of medium size. Occupation, a farm laborer. Had used tobacco from his youth, and at times would have a "drunk." It was found out that six or eight of the hardest boys in town were on a "spree" at the barber's shop the night before, and that he was one of the number; also that he had had hard words with one of them and wanted to fight, but was prevailed upon to go home at about ten o'clock, two of the number going part of the way with him, though he was not too drunk to walk alone. It is supposed he went directly home at that time, and knowing his condition, thought he would go to the barn and stay. He opened the door, and as it swung open he fell with it on his face, not making a move or struggle after.

I made the examination twelve hours after he left the shop, assisted by Drs. Thompson and Hazleton. I first removed the stomach, which was filled with partly digested food, and with a strong odor of alcohol, in fact, this odor was perceptible throughout the body. There was nothing abnormal about this organ, except small patches of inflammation caused by the alcohol.

I next opened the thorax; the lungs and pericardium were filled with blood; should think about twelve ounces ran from the latter. On making an examination of the heart, a rupture of the right auricle was found, the rent about half an inch in length. The walls of the right side were thin and dilated. He had never made complaint of heart trouble. The question in my mind is, what was the cause of the rupture at that time. Was it the rum, or falling with his face in the mud and being too drunk to get up? I give it as my opinion that rum was the cause of his death, and it should be a warning to all those who are addicted to its use. Taking all things into account, I think it a remarkable case, and should like to hear, through the columns of the REPORTER, from some one of more experience than myself.

F. H. CILLEY, M.D.

Barnet, Vt., Nov. 28th, 1877.

NEWS AND MISCELLANY.

Cremation in Italy.

The *Lancet*, of October 20th, says that, on the 9th of that month, at the cemetery of Riolo at Lodi, Prof. Gorini made a new trial of the crematory apparatus invented by himself. There were several distinguished persons present, among them Dr. Bono, who was delegated by the Council of Milan; Dr. Nardi, also of Milan; and representatives of the leading Italian papers, professional and lay. The number of army surgeons in attendance was also remarked. The body destined for cremation was that of a man, sixty-two years of age, and weighing forty two chilogrammes. It was introduced into the apparatus at 1 P.M. At 3 P.M. the fire had done its work, and there remained of the body only 5 per cent. of its original weight. Not the slightest fetor or disagreeable sensation was experienced by the bystanders. This result was obtained with the consumption of two hundred chilogrammes of wood. A round of applause saluted Professor Gorini, and, in the name of the company, Dr. Bono congratulated him on having produced the most expeditious and thorough crematory apparatus yet known.

The Anti-Contagious Diseases Folk.

The *Revue Scientifique* refers to the International Convention lately held at Geneva for the repression of prostitution. "This Congress," it says, "convoked by the English pietists, included a great number of Protestant clergymen of all countries and a good many elderly ladies. The walls of the hall of meeting were ornamented by pictures relating to the objects of the assembly. We remarked there a painting representing the horrors of a vivisection. A crowd of disheveled physiologists are represented as precipitating themselves, with

great knives in their hands, upon a poor dog who lay howling with all his might. A band of students provided for the occasion, with the countenances and demeanor of so many convicts, are represented as experiencing great enjoyment from the spectacle. Thus the authors of this precious picture depicted a course of physiology in one of the abandoned and evil disposed schools of medicine.

The Diphtheria.

In Conshohocken, and other outlying towns, diphtheria has spread so rapidly within the last few weeks as to become the occasion of considerable alarm. The health records in this city do not show any important increase in the number of cases, though last week there were more deaths from the disease than in any preceding week for several months. During October there were forty-two deaths from it, and in November forty-four. Health Officer Addicks assumes that there is no particular cause for alarm among the residents of Philadelphia.

Healthy Dwellings.

The New York *Times*, of the 18th, in a well-written editorial article, contrasts the evils of overcrowding, as shown in the tenement districts of that city, with the inestimable benefits enjoyed by the working classes in Philadelphia, and states that the difference is caused by the fact that in New York ground is generally divided into large plats, while here it is cut up into small lots, which any economical working-man can, by the help of our building associations, afford to own.

Death-Rate in Russia.

Official reports, issued by the Municipal Council of St. Petersburg place the death-rate of the capital for the past quarter as high as 35 per 1000, at Moscow 38, and in the southern towns from 40 to 45, a mortality surpassing that of India during the most unhealthy seasons. Scarlet fever, small-pox, and cholera are the diseases most prevalent, and, if anything, they rage with greater intensity in the country than in the towns. This great mortality is largely due to the utter neglect of the most simple laws of sanitary science on the part of the Russian lower classes, and to the absence of so many physicians and sanitary officers at the seat of war.

Artificial Milk.

A Liverpool correspondent writes:—

"A mixture of starch-paste, coloring matter, and new milk, so ingeniously effected as to give it the appearance of very rich cream, having been vended for that article by a milkman, an unappreciative customer caused his appearance before the magistrate, who, while

recognizing his originality and genius, felt compelled to mark his sense of the absence of other qualities, even more essential in a tradesman than they, by imposing a penalty of 20s. and costs."

Personal.

—Dr. Ralph M. Townsend, of this city, writes us from the North Woods, stating that he has quite recovered from the severe attack of pneumonitis he experienced in Colorado last spring, and hopes in a month or two to commence his very interesting letters on health resorts.

—Dr. Price, Assistant Physician of the Philadelphia Dispensary, has extracted as many as ninety teeth a day at that institution. An item worthy of consideration by dentists who are anxious about abuse of charities.

—Dr. W. R. Basham, well known for his works on renal diseases, died in London in October, in his seventy-fourth year, of apoplexy and paralysis. He was a gentleman of wide culture and highly esteemed in professional and social circles. For many years he had been senior physician to Westminster Hospital.

DEATHS.

BARDIN.—In Philadelphia, on the 28th ultimo, Harriet Newel, wife of Dr. A. Z. Bardin, in the sixty-second year of her age.

EDWARDS.—On the 8th ultimo, at Washington, D. C., Dr. Lewis A. Edwards, U. S. Army.

HASBROUCK.—At Hackensack, N. J., November 25th, Charles Hasbrouck, M. D., aged 59 years, 7 months and 14 days.

HINMAN.—In West Charleston, Vt., November 6th, Mary P., wife of Dr. George A. Hinman, aged 57 years.

HUKILL.—At West Liberty, W. Va., on the morning of the 4th of September, 1877, William Hukill, M. D., in the 88th year of his age.

MARRIAGES.

FOOTE.—At New Haven, Conn., Saturday, November 17th, Dr. Eliel T. Foote, formerly of Chautauque county, N. Y.

KEATING-MCALL.—In Philadelphia, on the 13th ultimo, by His Grace, Archbishop Wood, Dr. John M. Keating and Edith, daughter of Peter McCall, Esq.

LEACH-GODDARD.—On the 8th ultimo, at Worcester, Mass., by the Rev. Dr. E. Cutler, assisted by the Rev. Dr. E. G. Leach, of Boston, Alfonzo L. Leach, M. D., of this city, and Jennie W., daughter of Henry Goddard, Esq., of Worcester.

OXFORD-HORNE.—On Thursday evening, Nov. 22d, at Christ Church, Hackensack, N. J., by Rev. Wm. Welles Holley, Mary E. L. Horne, granddaughter of the late John Wyse, of Middletown, Conn., and George Morgan Oxford, M. D., all of Hackensack.

SMITH-BOWERS.—By Rev. B. Shields Sloan, at Nole, October 25th, 1877, John B. Smith, M. D., and Miss Elizabeth J. Bowers, all of Indiana county, Pa.

STROUT-Elliott.—On the 15th ultimo, at Washington, D. C., by the Rev. Joseph May, Dr. William D. Stroud, of Philadelphia, and Mrs. Mary J. Elliott, of Washington.